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United States Department of Agriculture
Bureau of Markets

SEED REPORTER

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ANNOUNCEMENT.

In accordance with the provisions contained in section 2, of an Act of Congress (Public No. 40, 65th Congress), approved August 10, 1917, the Chief of the Bureau of Markets of the United States Department of Agriculture, has been authorized and instructed as an agent of the Secretary of Agriculture, to take such steps as may be necessary to obtain authoritative information regarding the matters authorized to be investigated under that section.

The Seed Reporting Service has been established pursuant to sections 2 and 8, of the Act, to obtain such information concerning seeds, as may seem necessary or desirable.

The Seed Reporter is printed at, and mailed from, Chicago. The regular monthly issue is mailed as soon as off the press, which usually is between the sixth and tenth of the month. Persons or concerns wishing to receive it regularly as issued should send name and address to the Seed Reporting Service, Bureau of Markets, U. S. Department of Agriculture, Washington, D. C. A copy of the current issue will be furnished on application to the field office of the Seed Reporting Service, 59 Board of Trade Building, Chicago, Ill., to anyone after, but not before, nine o'clock of the morning of the first business day following date of mailing.

CHARLES J. BRAND, Chief, Bureau of Markets.
W. A. WHEELER, in Charge, Seed Reporting Service.

PARTIAL REPORT OF SEED SURVEY IN NEXT ISSUE.

A partial report of the War Emergency Seed Survey of July 1 probably will be published in the Seed Reporter under date of August 10. It is expected to give by divisions for all clovers and grasses and some other field seeds, the stock on hand July 1 of this year as compared with last year, the total receipts for the past twelve months compared with the total receipts for the twelve months previous. This will make the information available before the movement of most of the new crop seed, and, used in connection with the new crop estimates, should assist in forming a basis for market prices this season.

FACILITATING IMPORTS OF SEEDS.

In order that seedsmen may be informed regarding the best methods for securing import supplies of seed, the Seed Stocks Committee of the United States Department of Agriculture has taken up with the Bureau of Imports of the War Trade Board and with the Director of Operation, United States Shipping Board Emergency Fleet Corporation, the steps that must be taken in order to secure promptly such assistance as the Government Departments can render.

The following should, therefore, be borne in mind when the importation of seeds is contemplated:

An import license is required for the importation of seeds. The application should cover the whole amount on order with the seller. The term of the license is 90 days and partial shipments may be entered against the license until the whole amount mentioned in the license has been imported. Hence, importers will not be required to secure separate licenses for each of a number of small shipments which form in the aggregate a single order. It may be suggested that in cases where it is improbable that all shipments will be made from the same port, the importer should, in his application, state the ports from which the shipments are expected to come.

Application blanks for import licenses may be obtained from the Bureau of Imports, War Trade Board, Washington, D. C., or may be conveniently obtained from any of the Branch Offices of the War Trade Board which are located in various cities. These application blanks when properly filled out, should be forwarded to the Bureau of Imports, War Trade Board, Washington, D. C., which will act promptly upon the application and return the original license to the applicant when granted. The applicant should retain the original license to make entry of the shipments at the port of entry, and immediately upon receipt of the license should communicate the number to his shipper with sufficient particulars to identify the number with the shipment to which it applies, such as the name and quantity of the commodity and the name of the consignee. This is necessary as the Consul at the place of shipment must note the license number upon the consular invoice and unless this is done, the shipment will be delayed unnecessarily until it is attended to.

The Bureau of Imports, upon being informed by the importer, or otherwise having the matter brought to its attention, that an embargo has been placed against the export of the seeds in question on the part of the country of origin, will forward the application to the Seed Stocks Committee of the U. S. Department of Agriculture for its advice as to the importance of the seeds it is proposed to import to the agricultural interests of the United States, and upon a favorable recommendation of the Seed Stocks Committee, the Bureau of Imports will use every effort through its Representatives abroad, in securing an export permit from such country and whenever it is advisable, will ask for the cooperation of any other department of the Government in obtaining such export permit.

THE IMPORTANCE OF KNOWING THE GERMINATION OF CRIMSON CLOVER SEED.

Edgar Brown, Bureau of Plant Industry.

There are probably more failures in obtaining stands of crimson clover than of any other forage plant commonly grown in the United States. Crimson clover is especially susceptible to unfavorable weather and soil conditions, both at the time of seeding and immediately afterward. The stored seed loses its vitality more quickly than other seeds and as a result the crimson clover seed offered on the market, frequently contains an unusual proportion of dead seed. On account of the difficulty of getting a stand under the best conditions, it is important to know before seeding what proportion of any particular lot of seed may be expected to grow under favorable conditions so that the rate of seeding may be adjusted accordingly.

In former years most of the crimson clover seed used in this country was imported from Europe, and it is safe to say that all of the seed imported after December 1, as well as some of the seed that is imported earlier, is available for use the next season. Since December 1, 1917, 628,000 pounds have been imported, something less than one-third the amount imported in the corresponding period a year ago. The domestic production, however, has increased to such an extent that the amount of seed available for use this year will probably not be far from that which was available last year. Some of the imported seed as well as some of the domestic seed is of poor quality on account of low germination. It is, therefore, especially important that purchasers should know what part of the seed they are using can be expected to germinate.

The seed trade last year agreed to label all lots of ten pounds or more of forage plant seeds with the per cent of pure live seed, and purchasers should insist upon seed being labeled in this way. Otherwise, many crop failures will result, especially with crimson clover seed, from use of seed which will not grow sufficiently well to give a stand in the field.

Seed Reporting as a Public Service.

(Address Delivered by W. A. Wheeler, in Charge, Seed Reporting Service, Bureau of Markets, Before the Annual Convention of the American Seed Trade Association, at Chicago, June 18-20.)

The subject of this address, "Seed Reporting as a Public Service," is understood perhaps by most of the members who are in attendance at this meeting, as probably everyone here is engaged in some branch of the seed business. It is probable, however, that not all of you have taken time to consider how comprehensive the subject of seed reporting is. In order to present my conception of its field, I wish to define and give a brief outline of the object, scope, sources of obtaining and means of disseminating information, and the benefits or results that may be obtained from a seed reporting service. The word "report" is defined as "to give an account of," hence seed reporting can be defined broadly as giving an account of seeds. Everyone here is interested either directly or indirectly in the seed from the time it enters the ground and passes through the period of growth and maturity, until it is harvested and put into condition for marketing, ultimately reaching the consumer, only to have the same cycle repeated.

Soil, climatic conditions, insects, plant diseases, etc., have their influence on seed production, and because production has a distinct relation to supply and demand—marketing factors—it occupies a prominent place in seed reporting. As in the case of many of the products of the farm, until a comparatively recent date seed production problems have been over-emphasized at times and seed marketing problems overlooked most of the time. Therefore, a seed reporting service, not only because of its inherent nature, but because it aspires to strengthen economic distribution, should be concerned very largely with the marketing problems connected with seeds.

OBJECT.

The object of a seed reporting service is to obtain and acquire useful information relative to seed in a manner that will be of service to the public. Its purpose is solely constructive and not in the least destructive. Its purpose is to build up a nation-wide seed-information bureau that will be useful to everyone concerned in any way with the production, handling, or disposition of seeds. It is its object to help every commercial agency which renders a distinct service to the country, and to eliminate only such agencies, if any, which are merely parasitic in character and render no service for the toll which they exact from society.

In primitive times the producer and consumer were one; later there developed a necessity for agencies to handle the products produced and to deliver them to the consumer. This tendency has been to a large measure carried to the extreme. The most modern trend is to eliminate those middlemen who render no service, and retain those which are an economic necessity by working toward the rapid and efficient distribution of the products of the soil to the consumer.

Broadly speaking, the object of a seed reporting service is to make all kinds of general seed information available to every activity connected with production, distribution, and consumption of seed. In the past the difficulty has been that there has been no disinterested public medium through which the exchange of information in a useful manner could be accomplished.

The Department of Agriculture has given much assistance to farmers and growers in the past in furnishing information to increase production and produce a better quality of seed. It is only recently that any organized effort in the Department has been made to assist the farmer or grower and the dealer in marketing seeds more efficiently and economically, and in helping him solve some of the problems of distribution and marketing. The Seed Reporting Service of the Bureau of Markets is the concrete expression of the Department in its effort to assist the seed trade along these lines.

SCOPE.

Production.—A seed reporting service should take into consideration all phases of production including (a) timely reports on growing crops, (b) prospective and actual acreage planted to seed crops, (c) location and adaptability of seed-producing areas to the production of special seed crops, (d) prospective and actual production by divisions or districts, (e) average yield per acre and comparisons with other years, and any other subjects pertaining to seed production. In the present organization of the United States Department of Agriculture the reporting of acreage and production of most farm-crop seeds is being done by the Bureau of Crop Estimates. The reporting of vegetable-seed production and that of a few other crops is being done by the Seed Reporting Service of the Bureau of Markets.

Movement.—One of the most important activities in seed reporting is to render assistance in facilitating the distribution of surplus production in the most economical manner to localities where needed. It is important for the seed trade to know not only the location of surplus stocks but the time and direction of movement, the quantity moving, and the bearing that weather conditions, transportation facilities, embargoes, and other factors have upon the movement.

Stocks.—The semi-annual national seed surveys make information available for practically all field and vegetable seeds as to total stocks on hand both at the "peak" of the season, February 1, and at the time when stocks are lowest, July 1. In addition to the national surveys, special surveys are made on certain crops at times when especially needed. The publication of the data obtained from these surveys gives the country an accurate knowledge of the seed stocks, both as to quantity and location and is recognized as of invaluable aid to growers, distributors and consumers alike.

Prices.—Every grower of and dealer in seeds wishes to have the latest information relative to factors affecting the prices of the seeds grown or handled by him. The Seed Reporting Service endeavors to give an accurate basis for the determination of prices to be paid to the grower and to the dealer, comparisons with prices paid at the same time for similar seeds when used for food, feed, or manufacturing purposes, comparisons of prices in different divisions, and other data which may be useful in arriving at fair prices.

Qualities.—A knowledge of the total production, movement, stocks, etc., is insufficient in assigning total or relative value to any seed crop without taking quality into consideration. Reports should give, in so far as possible, factors which may affect the quality of seeds, such as unseasonable weather conditions or damage by insects or diseases. It is also important to know the average germination of the seed crop of any year and of the carry-over from other years. During the past season, the Seed Reporting Service indicated the condition of seed corn long before the devastating effect of early frosts was recognized fully by many of those engaged in handling seed corn.

Exports and Imports.—It is not possible to consider intelligently supply and demand in any country without giving proper weight to the surplus and requirements of other countries which are in part shown by exports and imports. The seed trade should know not only the quantities actually moving as exports and imports, but should also have additional information as to the requirements and supplies of various countries that are not indicated clearly by exports and imports, in order that they may govern their business accordingly. By a comparison of the total requirements of the United States with the total available stocks, as given by the Seed Reporting Service, it will be possible also to determine when there is a surplus for export.

OBTAINING INFORMATION.

Sources.—The two sources most commonly made use of are: First, individuals, or concerns engaged in some branch of the seed business; and, second, those who happen to be favorably located to obtain information for a recognized area, such as a county, district, or section, and whose knowledge and experience in matters pertaining to seeds qualify them to act as reporters for a certain area.

Information from these sources is obtained in various ways, among which are general questionnaires, special letter or circular inquiries, personal visits by field men, and survey schedules authorized by law.

Regular inquiries or survey schedules commonly are used in obtaining information from seed growers or dealers. These inquiries or surveys may be either national or sectional in character, and may relate either to one or a few crops or be comprehensive in scope and cover a great number of vegetable and field seeds. In practically all cases, information obtained from growers and dealers would be on a basis of actual quantities that are in stock or handled during a specified period. Information from county and district reporters will in most cases be in the nature of estimates, relative or otherwise, as to production, stocks, movement, etc.

There are advantages in both of these sources of information. The securing of data from the first source, namely, individuals or concerns reporting for their own business, can be assumed to be a possible means of obtaining complete information, and is the more accurate method of the two. It is, however, often somewhat slow and cumbersome, because of the great number of individuals or concerns who must be reached in order to obtain complete information. The second source, namely, the use of county or sectional reporters in furnishing estimates, has the advantage of making information available more quickly and may be assumed to cover the field more completely than the former. There are possibilities in both methods of arriving at satisfactory data. Where information covers actual stocks on the basis of actual reports from growers or dealers, it represents the best that can be obtained, providing extreme care is taken to make it as nearly complete as possible. Whatever means may be used generally for obtaining information, it is apparent that periodical surveys of actual stocks should be made to serve as a basis upon which to check estimates made at other times.

National Seed Surveys.—Possibly it would not be amiss here to say that the semi-annual seed survey of the Seed Reporting Service to determine stocks of seed on hand, the production of various seeds, the shipments and exports of seeds, etc., is the corner-stone of the work outlined above. It is the semi-annual seed inventory of the American seed concerns. Primarily war conditions were responsible for this measure but it would prove equally valuable during peace times. If it is good business for an individual seed concern to take an inventory twice a year, it is also good business for the nation that the seed stocks as a whole be taken twice each year.

A survey of stocks on hand, including all receipts, is taken at times when stocks are at their maximum and when at their minimum, February 1 and July 1, respectively. The latter survey shows the "carry-over" or reserve seed supply and total receipts for the 12 months preceding. From these figures the annual demand or consumption may be determined approximately, and movement of seeds from one dealer to another or from dealer to grower and other useful information may be obtained. It is to be expected that total receipts as given may and generally do show some duplications, because of reshipments of stocks, but from a careful study of reports it is possible to arrive at a basis for making due allowance for any such duplications.

Geographical Division.—The area of the United States is so large and the soil, climate, and topography are so varied, that general statements of a condition have little specific value. What is true of the East is not necessarily true of the West; what is true of the North is not necessarily true of the South. Hence it is obvious that this large country with its various conditions must be divided for seed reporting. In the divisions which have been made by the Seed Reporting Service of the Bureau of Markets, some attempt has been made to group together in a division those adjacent States and portions of other States, accessible to an important seed marketing point, whose seed problems are similar. With this in mind ten divisions were decided upon tentatively as follows: North Atlantic, Middle Atlantic, Southeastern, East Central, North Central, West Central, Southwestern, Rocky Mountain, North Pacific, and South Pacific.

At times it will be found advisable to give information for a smaller unit than a division, and for that reason each of the divisions has been divided into districts, of which there are one to several for each State, depending upon the size of the State and upon general conditions.

Catalog of Information.—In order to assist in making the information of the Seed Reporting Service available to commercial, private, State, and Federal agencies, card catalogs are being compiled of seedsmen, shippers, growers, etc., in which names are classified according to the kind of seed business conducted, side lines are given, kind or kinds of seeds specialized in are indicated, and records made to show whether catalogs or price lists are issued, and other information continually made use of in compiling data and in answering inquiries as noted.

DISSEMINATING INFORMATION.

Seed Reporter.—Of the three mediums through which information is disseminated, the "Seed Reporter" is the most important. It is the official organ of the Seed Reporting Service of the Bureau of Markets and is issued monthly or oftener when necessary. It is usually mailed the first Saturday after the fourth of each month. It is sent to growers, dealers, shippers, State, and Federal agencies, and others who are interested in any way in the subject of seeds. Figures from surveys, data obtained from special inquiries, import and export tables, notices of embargoes, price restrictions, or any new rulings affecting the traffic in seeds, seed market notes from the most important seed markets, growing crop information, and short articles prepared by specialists in the various Bureaus are covered at frequent intervals in the "Seed Reporter." In fact, the many phases of the seed business included in the scope of the Seed Reporting Service, as outlined briefly above under that heading, are described in this publication from time to time. In so far as possible, matters of timely interest are given precedence over those of merely general interest. Obviously it is impossible to cover the entire field in each issue, hence an attempt is made to discuss subjects and to give figures that will be of the greatest interest at the time to the majority of the readers. It is not intended that the "Seed Reporter" will be an advertising medium for growers or dealers, not that it will run exchange columns, because it is felt that there are other agencies already in existence for these purposes and that its scope now is broad enough.

Special Reports.—Whenever peculiar emergencies arise that demand special consideration, special reports are issued at weekly intervals or oftener. Last spring when it was apparent that considerable difficulty would be encountered in finding plenty of good seed corn, three of the branch offices of the Seed Reporting Service at Chicago, Minneapolis, and Kansas City, the headquarters of the East Central, North Central, and West Central Divisions, issued "Weekly Seed Corn Reports." Because of the very nature of the special reports they are not of such general interest to so wide an area as is the regular monthly publication of the Service, hence the distribution of the special reports is confined to a restricted mailing list in one or more divisions. In the future it may be necessary to send special reports in mimeograph form to the complete mailing list of the "Seed Reporter" in order to make available more quickly certain kinds of timely information that cannot be held for a forthcoming issue of the "Seed Reporter."

Individual Inquiries.—Numerous inquiries are received relative to seeds that cannot well be answered within the columns of the "Seed Reporter," but must be replied to by letter. Obviously it would be impossible for the Seed Reporting Service, with its personnel and the funds allotted to it, to answer more than the smallest fraction of the inquiries if each individual or concern engaged in the seed business should write for information. Whenever a number of inquiries relative to the same subject can be covered by an article or a table of figures, the subject is given a place in the "Seed Reporter." In this way individual inquiries, though the most costly manner of disseminating information when taking into consideration the number of persons served, are of value as an indicator of what the public desires to know about the seed business. The Seed Reporting Service does not publish a list of growers, dealers, or consumers of seeds, but is willing to give, upon application, a very limited number of addresses that might enable individuals or concerns to secure or dispose of a few kinds of seeds that they actually wish to buy or sell at the time of making inquiry. Extensive lists of buyers or sellers of various kinds of seeds that may be used for the purpose of building up mailing lists will not be given except in some cases to State or Federal agencies who will conform to the policy adopted by the Bureau of Markets in giving out lists of addresses.

PUBLIC SERVICE.

I have made no attempt in the foregoing to state what benefits might be derived from a seed reporting service to entitle it to be classed as a public service. Under normal conditions the benefits of seed reporting are quite apparent, but it is obvious that a decided advantage to the country under war conditions accrues through a thorough and complete knowledge of seed stocks, movement, and prices. War conditions have suddenly thrown the American seedsman on his own resources in regard to the supply of many seeds formerly obtained in foreign countries. This, coupled with an unusually heavy demand on the part of farmers and home gardeners, has brought about unusual conditions in many lines of the seed business. Normal agencies are all upset; imports are cut off; and shortage of labor has created conditions conducive to low production in certain regions. If we are to produce the large crops which war conditions demand, we must have seed. To increase intelligently our seed supplies, it is necessary first to ascertain of what kinds of seeds there is a shortage, and of what kinds there is a surplus. Seed growers must be informed as to the approximate probable demands of the consumers in order that their acreage may be planted intelligently.

Exports must be regulated to prevent seed being shipped abroad that is needed at home. These things all make necessary the most careful study of all factors affecting seed production and distribution.

The Stabilizing of Prices.—The reports of the Seed Reporting Service showing the amounts of the various kinds of seed on hand, considered in connection with the annual carry-over, probably have had and will continue to have a stabilizing effect on market prices. In the reports published last spring, it was evident that in the case of certain seeds of which there was thought to be a shortage, there was in reality a surplus, though in some cases this was a very small surplus. In some instances the distribution was at fault because too large a percentage of the total stock of some particular kind of seed was held by one or two concerns. By revealing the quantities of the various kinds of seed that are on hand, there is less chance for guess-work or speculation. Frequently surveys uncover stocks of certain kinds of seeds that were unknown to the trade, and, by disclosing in a general way the extent of such stocks, a price lever has in some instances been maintained.

Public Welfare First.—It is recognized that in the seed business, like many other lines of merchandising, many concerns have accumulated methods, information, and experience which they have been able to use to the peculiar advantage of their own business, and that a seed reporting service for the benefit of the public will impart much of that kind of information to the public instead of keeping it confidential or semi-confidential with one concern or with a few especially favored concerns. It should not be the purpose of any public service to convey information to anyone covering the private transactions of another, but it should be the purpose of a seed reporting service to convey general information which might be utilized to the advantage of all concerned. In other words, the peculiar benefit that might be derived by an individual through the possession of certain general information would have to be sacrificed through a seed reporting service which would make public such general information for the use of all. To a certain extent all progressvie and modern lines of business pave the way for other untried lines, and pioneer concerns in any line tend to pave the way for those venturing in the field at a later date. This is in line with modern progress. It is natural that an individual concern with peculiar advantages because of location, position, or opportunity, may wish to make capital of such advantages and this is not meant to imply that it is not his right to do so. However, when it is to the advantage of the country at large, either in normal times or during a crisis such as this country is passing through at the present time, that any kind of information should be made public, it is decidedly wrong if such information be kept from the public. Public welfare should come first, and individual gain or advantage second. The fundamental principle underlying any public service should be the benefit to the larger number without any more than consequential injury to the few. As a matter of fact, though this is not always apparent, that which is for the benefit of the greater number seldom reacts to the permanent detriment of any individual.

Analysis of Reports.—Some advantage may be gained from the reports of the Seed Reporting Service by the larger and better organized concerns in being better able to analyze or interpret the data given so as to obtain the maximum value therefrom. This will serve in a measure to compensate these larger firms for any advantages which they previously had, by reason of their organization, in sizing up seed trade conditions each year as smaller concerns could not afford and were not able to do. It is thought that the interpretation of published reports should be left to the particular person or business wishing to use the reports. The individual concern which will be able to make the greatest use of the information given will be the one that gives the closest and most thorough study to the facts and figures that are made available to it. A great deal more information can be gained from a few columns of figures than is apparent on the face of the mere presentation of such figures. A careful analysis, as relates to a man's particular line of business or to his locality, usually will be of service to him.

Economy of Government Reports.—I do not think that many will dispute the fact that seed information, covering growing crop conditions, movement, prices, qualities, and demands, which in the past has been compiled by many of the seedsmen. at much expense in the aggregate, can be obtained more economicaly through a government seed reporting service. The business of the smaller concerns has not warranted them in undergoing much expense in obtaining advance seed information and they have thereby been handicapped. It is true that the Seed Reporting Service of the Bureau of Markets will not obtain all the information or the particular kind of information desired by some of the largest seedsmen, and they perhaps will find it necessary to conduct their own system of securing reports in conjunction with the Government's published reports.

Better Records.—A well organized seed reporting service in which national and sectional surveys are made at regular intervals should bring about better accounting methods and better stock records among seed growers and dealers. These records will be needed by them in order to give the information required and a direct gain through such improved methods should accrue to the growers and dealers in having a more detailed knowledge of their business. It is recognized that many of the larger institutions already have improved methods, but it is rather surprising how many who should have such methods really are in the dark regarding many phases of their business which they should know clearly and fully. Seed reporting should bring about more uniform methods and more frequent inventories. It should also have an influence in encouraging better practices and developing a closer connection among seedsmen.

There is no question that many shipments are made to distant points that should be made to nearer points. In the fall of the year certain seeds should move to seed markets to the south of the production area instead of to the north, because at that time or shortly after the harvesting of such crops, there is a demand only in the South for the use of such seeds for fall or early winter sowing.

Transportation Economies.—Seed shipments are necessarily made at a time of the year when railroad equipment is in greatest demand, and any measure that will tend to conserve this equipment will be a decided step toward transportation economy. This was illustrated last fall and winter, perhaps, better than at any other time. The congestion of railroads was so serious that seeds could not be moved without considerable delay, if at all, to distributing or consuming points. Transportation economies are being practiced in other lines and should be encouraged in seed lines. Seed that is needed locally is more likely to be retained and that which is surplus probably will not be shipped to as distant markets if it is made evident from published information that nearer markets at a given time are just as good as, if not better than, the distant markets.

Clearing House for Information.—From every field of activity comes a plea for service. It seems to be the new order of things. The incentive for action under the old order was "How much money is there in it for me?" Now the incentive is "What service can I render?" With the advent of the Seed Reporting Service of the Bureau of Markets, an opportunity to better seed marketing conditions has been given those connected with the seed business. Although at first considered by some as a useless undertaking, an added burden seeking to make public use of private information, or otherwise misunderstood, the Seed Reporting Service is accomplishing its original purpose of rendering a service to the seed trade by acting as a medium through which those engaged in any way in the seed business may serve themselves and others without revealing their identity. The availability of vital trade information in many lines of business always has been limited because of the absence of a common clearing house at which the information could be collected, and of a medium through which the combined and concentrated information could be distributed successfully without revealing the identity of, or having a detrimental effect upon, the business of any individual or concern.

Cooperation of Trade Necessary.—In order to make a seed reporting service a complete success, the most thorough cooperation should exist between the service and all those individuals who are to be benefited by it and from whom it is necessary to obtain information. Practically all lines of public service are simply cooperative institutions and assistance must be rendered in a cooperative organization by every one serving or being served. I believe that everyone will admit that a seed reporting service properly conducted will eventually result in the greatest good to the greatest number. If that is true no harm can come to the seed business by revealing to everyone interested, either directly or indirectly, the general facts pertaining to it. In order to make the Seed Reporting Service of the Bureau of Markets of the greatest value it is necessary that the cooperation of grower, dealer, and important consumer be extended in every way to the service. The information obtained from each of several concerns may

in itself not be of particular value, but collectively or in the aggregate the information is likely to be of considerable value. Therefore, whenever you are called upon to furnish reports or reply to special or general inquiries, it is hoped that you will make it possible for us to obtain this collected information that really is worth while.

In conclusion, I wish to state that some of the things that we set out to do in the Seed Reporting Service have been accomplished, but many more remain to be done and will be done if the splendid cooperation that is being given us, largely by those concerns whose representatives are assembled here, continues to be in evidence. The value of the Seed Reporting Service, even in its infancy, according to letters and resolutions on file, has been recognized, especially by the trade and by State agencies. It is hoped that as it continues to grow in age and experience it will merit more fully the commendation already expressed for it.

Orchard Grass Seed Outlook.

The acreage of orchard grass in the section of Kentucky and Indiana adjacent to Louisville, Kentucky, is probably 15 per cent less than that of last year, but in central Kentucky the acreage is larger. Smaller acreages are reported in southern Kentucky and Ohio, but conditions in these sections have not been ascertained.

In the principal producing sections the crop has been harvested under the most ideal conditions, and the seed will doubtless be bright and well filled. Although there is considerable clover leaf in the old fields, the bulk orchard grass seed will contain few weed seeds and impurities, as most of the crop has been harvested from new fields which are practically free from weeds.

Threshing began the last of June, about two weeks earlier than normally, and the yield per acre promises to be extraordinarily good, which will more than make up for any decrease in total production because of reduced acreage.

Farmers are talking of $3.00 per bushel for choice seed, while dealers are not inclined to pay anything like these prices and think that $2.00 is a fair price; consequently, practically no sales have been made up to this time. Farmers say that labor is high, bags cost 60 cents each, other crops are bringing good prices, and that they have money and will hold their seed.

It is doubtful whether there will be much export demand, and with an almost continuous falling off of home demand, dealers say that the risk is too great to warrant paying high prices for this crop early in the season.

Smaller stocks are reported in primary dealers' hands than were held by them at a corresponding time last year because the record high prices during the spring of 1918 did not warrant much carry-over if it could be avoided.

Kentucky Bluegrass Seed Situation.

Kentucky.—In Kentucky the acreage of Kentucky bluegrass stripped this year is somewhat less than in 1917. However, the estimated production is much greater, being 350,000 bushels as compared with 200,000 bushels for 1917.

The quality of the new crop is good. Although there is some sedge and other weeds, as well as clover leaf, and some of the seed was stripped too early or ripened prematurely, the bulk of the crop is clean and was harvested and cured under the most favorable conditions and should be bright and of good germination.

Notwithstanding the fact that the seed was stripped about ten days earlier than normally, there has been less trading up to this date than has ever been known before. A small quantity of seed changed hands early, mainly among farmers, at about $1.50 per bushel for dry seed, August delivery. This seems to be the prevailing price growers are asking at present.

Dealers say that a fair quantity of old seed is carried over, and with the new crop estimated to be much greater than last year they are not inclined to pay the high price asked by the farmers. They seem to prefer to look on awhile and await the development of more outside demand or a modification of the farmers' views.

These conditions would indicate that the crop will not move as early this season as in previous years, and that unless there is a change in the attitude of growers or dealers it is not probable that much seed will be sold before August.

Missouri Valley.—The seed trade in general refer to the crop of Kentucky bluegrass seed in the Missouri Valley district as "Missouri Seed," because the bulk of the seed is produced in northern Missouri. However, some of the seed is produced in southern Iowa, and a limited quantity in a small area of eastern Kansas.

The crop during normal years is harvested between June 10 and June 20 in Missouri, and a week later in Iowa. This year stripping began a few days earlier than usual and is now completed. It is estimated that the acreage stripped in 1918 is about one-third of that stripped in 1917, and about one-tenth to one-twelfth of that stripped in a normal year. Because of unfavorable weather conditions the Missouri crop has been short for three years. This year's crop is the shortest since Kentucky bluegrass seed production became a permanent factor in Missouri agriculture. There is some variance of opinion among the large cleaners regarding this year's crop in the Missouri Valley, some estimating it at 15,000, while others at 25,000 bushels of stripped seed, but it appears that 20,000 bushels is a fair estimate and more nearly the actual quantity harvested. Practically all of this quantity was gathered in Missouri. Lack of moisture during winter and spring, cold weather during April (which is the principal growing month), reduced acreage (largely because of high prices of grain crops), and an increase of cattle and sheep on the pastures, were the principal influences which have affected the size of the crop.

The carry-over of old seed in the Missouri Valley district is negligible. Last year the combined crop of new and old seed was estimated at 50,000 to 60,000 bushels of stripped or rough seed. A normal crop of seed is between 200,000 and 250,000 bushels. The largest crop was in 1912, when 400,000 bushels were produced. The seed this year is of good color and fair weight, and the quality is reported to be better than that for the past few years. Some of the fields were weedy but not any more so than usual. The large cleaners believe the rough seed will thresh out a higher percentage of recleaned seed than it has the past two years. The stripping and curing season was ideal and the seed should cure up in the best possible shape.

There has been no activity on the part of the Missouri Valley cleaners to contract seed, and they report that they prefer to go slowly on account of the reported large crop in Kentucky, and fair stocks of old seed being carried by jobbers throughout the country. Missouri Valley cleaners are not bidding or quoting prices on seed at present, but the market should become active early in July as the bulk of the seed moves from first hands during July and August. Most of the farmers are bullish and inclined to await developments, but some are endeavoring to obtain bids on their seed. This condition usually exists, as the farmers seldom sell right after harvest. This year's crop is insufficient to meet the requirements of the Missouri Valley cleaners and they will have to look to Kentucky for the bulk of their seed.

Meadow Fescue or English Bluegrass Seed Outlook.

It is estimated that 90 per cent of the recleaned seed of the meadow fescue or English bluegrass crop produced in this country is exported, and because of a falling off in the export demand, which resulted in a material decline in the market, very little attention has been given to the production of this crop since the beginning of the War. Between 75 and 90 per cent of the acreage has been plowed up during the past three years, because of poor demand, low prices offered for the seed, and high prices offered for grain crops. This was an inducement to the farmers to sow their land to small grain crops, mostly wheat. It is believed that the acreage of meadow fescue will increase rapidly with the cessation of the War, as the European demand will then cause a much better condition of the market.

Large country shippers and the Missouri Valley jobbers have estimated the crop at 10 per cent of normal. The general opinion is that not over 10,000 to 12,000 bushels, or from five to six cars, of seed will be available for shipment this year from the two principal producing sections. Last year about twenty cars, and during a normal year before the War about fifty cars, were shipped from the same sections.

Harvesting began a week or ten days earlier than usual, because of the hot dry weather. The quality of the seed is reported to be good everywhere, owing to the favorable weather conditions, and is equal to if not better than the average for a number of years. The seed will be of good, bright color, unless stained by rains between the time of harvest and threshing. It should be of good

weight in general, but in a few fields where the straw is ripening before the seed is mature the seed will be lightweight. The Kansas fields contain considerable cheat and some pepper-grass, but it is reported that the Missouri fields, especially the old meadows, are fairly free from weeds. The best quality seed will be from the old meadows, as the new meadows are more or less weedy, on account of the dry weather which resulted in a poor stand of meadow fescue on new fields.

Very little interest is being shown in the marketing of the crop, either by farmers or dealers, at this time. The dealers are still carrying some old seed that they have been unable to dispose of, and are not anxious buyers of additional or new stock. Because it is almost impossible to obtain cargo space on ships, and because ocean freight and insurance rates are high, the jobbers are making little effort to export. The jobbers also report that European buyers are not making any inquiry and do not seem to be taking any interest in meadow fescue seed. Consequently no bids are being made, no prices have been quoted, and no new seed has been contracted for. General activities and movement will be most likely during August, as it is during this month that the bulk of the seed is bought by the jobbers.

ONION SET CONDITIONS.

The condition of onion sets in the Chicago district has not improved in the last month according to reports received. No extended survey of the condition of the crop at this time has been undertaken, however.

Smut and maggots have developed to quite an extent and many complaints have been received, especially from the "South Side." Many growers think that these conditions have materially reduced the outlook for a good crop of sets.

Generally favorable weather conditions have prevailed and there are few reports of abandoned acreages. If favorable weather conditions prevail until the crop is harvested, the yield may yet turn out satisfactorily though growers at present do not view the situation very hopefully. Prices at present are in a very unsettled condition and there is a considerable variation in selling prices among important growers.

At Louisville, Ky., it was thought from previous reports that the hot weather prevailing during the week, June 9-15, had injured the onion sets to a considerable extent. However, the crop has been benefited greatly by recent rains and an average crop of good quality small sets may be produced.

Protect Seeds with Carbon Disulphid.

E. A. Back, Bureau of Entomology.

At this season of the year insects begin to multiply rapidly. This is particularly true of those attacking seeds in storage. A careful inspection at this time may save the seed owner much worry and loss later. The slight infestation now can be controlled far more easily than after the insects have become exceedingly abundant. The percentage of insects that may survive a treatment given now represents a very small number, numerically speaking, in comparison with the number of insects represented by the same percentage that survive a treatment made after the pest has had all summer in which to multiply. The one per cent of insects that escape in the treatment of slightly infested seeds represents too small a number to cause appreciable injury for some time to come, whereas the one per cent that escapes after the pest has become a serious menace represents such a large number that a second treatment very soon may be needed.

Seeds should be examined now to make certain that insects are not already working in them. Many seeds will be found free from pests. Experienced seedsmen know that many kinds of seeds need little attention so far as insects are concerned, that others are only occasionally attacked, while others, such as beans, cowpeas, and corn, are always subject to more or less injury. The farther south one goes, the greater the injury and the wider the range of seeds affected.

Although heating seeds to a temperature of 120° to 130° F. for a comparatively short time has been found an excellent method of killing insects, there is nothing more valuable in the average seed warehouse than scrupulous cleanliness and a good supply of carbon disulphid. So many of the pests that get into seeds can and do breed in the seeds and grain particles that get lodged in the cracks in the flooring and that often accumulate in a corner, behind barrels, in boxes, etc., that it is poor policy to attempt to suppress insects in the stocks without first cleaning out these breeding places or unnecessary sources of infestation, from which newly acquired and clean stocks become infested.

There is nothing more useful than carbon disulphid in killing pests in stored seeds. As the gas formed by this fumigant is explosive if brought into contact with fire, its nature should be understood before fumigation with it is attempted. Farmers' Bulletin No. 799, "Carbon Disulphid as an Insecticide," contains all the needed information regarding carbon disulphid and its use and will be sent free of charge to any person upon application to the Chief, Division of Publications, U. S. Department of Agriculture, Washington, D. C. While this fumigant cannot be used safely on a large scale in congested towns or city blocks, it can be relied upon to give good results even in these places when used for the protection of seeds in very tightly constructed bins, barrels, or boxes.

The chief draw-back to obtain satisfactory results from the use of carbon disulphid has been due, in many instances, to the failure of the person using it to realize that he must place his seeds in a practically air-tight container. The gas formed is heavier than air and seeks every crack from which to escape. It is only by preventing its escape that the air about the seeds can be kept so charged that the adult insects are killed and that the gas can have time to work into the cavities made by the insects in the seeds and there kill the insects in their immature stages. In these immature stages of development the pests quite often do escape when seeds are partially fumigated.

Special emphasis is laid upon the need of a tight container for successful fumigation. Fumigation bins and boxes can be constructed so tightly that the disagreeable odor of carbon disulphid cannot be detected after the containers have been closed and sealed for fumigation. Bins constructed with two thicknesses of matched boards, with building paper between, have been tried with success. Other bins made of one thickness of matched boards and painted on the inside with a thin cement paint to fill cracks have given good results. Certain seedsmen have specially constructed rooms large enough to hold a carload of seeds during fumigation. Any intelligent seedsman can exercise ingenuity enough to construct a tight container to meet his particular needs.

Movement of Forage Crop Seeds from First Hands.

A summary of the time of movement from farmers' hands of the various forage crop seeds throughout principal producing sections is given below from information obtained from farmers and shippers in important seed producing sections.

Timothy.—This crop is harvested for seed purposes usually about the middle of July, and the seed begins to move from growers' hands immediately after threshing, which is about two weeks later. In northern and central Ohio, however, the farmers do not market their seed until the fall plowing or seeding is well under way, which is about October 1. In some of the more northern producing sections, Minnesota and Wisconsin, the crop normally matures a week or ten days later, and harvesting is sometimes delayed fifteen to thirty days because of backward seasons. The movement from first hands is general during the last of August and all of September. Farmers do not usually hold their seed except when the price is very low, when some few will hold their supply until the spring demand. Formerly considerable timothy seed was contracted for in advance of the harvest season by merchants at shipping points acting for large seedsmen.

Kentucky Bluegrass.—Under normal conditions the stripping season begins between June 5 and June 10 in Kentucky, between June 10 and June 15 in Missouri, and June 15 to June 20 in Iowa. General movement from first hands occurs during June, July, and August, depending upon the section. Dealers in Kentucky contract for some seed just before harvest, but the bulk of the seed is bought after harvest and usually for August delivery, the quantity in each case depending on market conditions. Some dealers in Missouri contract for the acreage and harvest the seed themselves, but the bulk of the seed produced is gathered by individual farmers, who begin marketing the crop as soon as it is cured.

Meadow Fescue.—This crop is grown in eastern Kansas and western Missouri, and the seed is sold principally for export. It is cut about July 1, and threshing begins July

10 to 15. Farmers begin delivering their seed to shippers' or dealers' warehouses at country points immediately after harvest; the movement continuing heavy throughout July and August. The large dealers bid through their representatives at production centers and most of the farmers, knowing that the seed must move in time for export, endeavor to dispose of their holdings during August, though they occasionally hold their seed a month or more after that time in anticipation of higher prices.

Orchard Grass.—The seed of this grass, like meadow fescue, is practically all produced in one well defined section, namely, northern Kentucky and a small adjoining locality in southwestern Ohio and southern Indiana. Harvesting takes place about June 15 to June 20. The movement from farmers' hands begins about July 1 and continues heavy for three months or longer thereafter, depending upon prices offered, etc. Under normal conditions, however, the bulk of the seed is sold by farmers by September 1. Louisville, Kentucky, is a large marketing point near the principal production area and, freight being low, many farmers sell and ship direct to dealers located there.

Redtop.—Probably 95 per cent of the seed of this crop is produced in seven or eight counties in southern Illinois. The crop is cut for seed about the middle of July. Threshing begins a week to ten days after cutting and is general by the first of August. Movement from farmers' to shippers' hands begins August 1, and continues until November or December. The bulk of the crop is sold and delivered to dealers by September 15 or October 1, depending upon prices offered and market outlook.

Clovers.—Medium red, mammoth red, and alsike clover seed are produced in a number of well defined sections scattered over a wide area, and the movement depends somewhat on the locality. In Minnesota and Wisconsin, the entire crop is usually marketed by December 1, with the heaviest movement during early fall months, as farmers do not hold seed unless the price offered is below their idea of a fair value. The bulk of the seed in Indiana is sold at hulling time unless the price offered is very low. In that State mammoth begins coming on the market August 20 and medium, September 1. In Michigan and Ohio, alsike and mammoth begin to move the last of July or the first of August; medium the last of September or the first of October. In Missouri and Kansas, the movement from first hands is active throughout the months of September, October, and November, but often quite a few farmers hold their supply until the spring demand.

Sweet Clover or Melilotus.—Most of the commercial sweet clover seed is produced in Kansas, Nebraska, Montana, Wyoming, Utah, and Kentucky and small quantities in Alabama, Mississippi, and other States. Movement from first hands begins in September and continues throughout October and November. In Kentucky, the yellow blossom variety is harvested about July 1 and the white blossom three weeks later. Small quantities are stripped by hand by laborers and marketed in the hull during late summer or early fall in a few of the Southern States.

Bur Clover, Southern Spotted Leaf.—Seed is harvested in June by hand and the movement to shippers and dealers begins immediately thereafter. It is always sold in the bur. The heaviest movement from first hands occurs during the month of July. A good many growers market their seed direct to other farmers later during the planting season, which is August 1 to October 1.

Alfalfa.—The commercial production of alfalfa seed occurs almost entirely west of the one-hundredth meridian. The movement in most sections depends upon the weather conditions and whether seed is harvested from the second or third crop. Ordinarily the first seed to come on the market is produced in Texas, New Mexico, Arizona, and southern Colorado and Oklahoma. This seed usually begins to move in July and continues to move in large quantities until September. Seed produced in Kansas, Nebraska and northern Oklahoma begins to move in August and continues until November 1. Seed from western South Dakota and Montana does not begin to move until the bulk of the seed from other sections has passed out of the farmers' hands.

Lespedeza.—Lespedeza seed is produced commercially in the Lower Mississippi Delta in the States of Louisiana and Mississippi. However, an increasing quantity is being produced in northern Alabama and Mississippi, southern Tennessee, and southeastern Arkansas. It is harvested in November, and movement begins immediately thereafter. Dealers are active during the harvest period and usually buy early; hence, the heaviest movement from farmers' hands is during the month of December. Many of the larger producers hold their seed until the planting season during February and March, when they sell it direct to other farmers.

Sorgo or "Cane" and Grain Sorghums.—These are the dry land crops of the southern half of the Great Plains region. The movement of sorgo from first hands begins in November and continues until May. Heaviest movement occurs during November, December, and January. The movement of grain sorghums also extends over a long period, from November to June. However, the heaviest movement occurs between November and March.

Millets.—The movement of millet from farmers' hands in the West Central and Southwestern Divisions begins in October and continues until June, with movement heaviest during October and November. In Tennessee the movement is earlier, being heaviest during September.

Sudan Grass.—Most of the Sudan grass seed is produced in the arid plains of the Southwest, where climatic conditions are more conducive to seed production than in humid sections. The movement from first hands is heaviest during October and November, but there is considerable variation in this, depending largely upon the size of the crop.

Cowpeas.—These are produced most extensively throughout the Cotton Belt. The crop is harvested for seed from August 1 to October 15, depending upon the variety grown and time planted. Movement from farmers' hands begins about November 15 and continues through the winter months. Some farmers harvest their crop by machinery, and the seed is ready to be marketed immediately, but many others, who gather the peas by hand, store them until spring before hulling. The heaviest movement occurs during December, January, and February. Rapidity of movement is governed principally by price offered and market outlook.

Soy Beans.—In eastern North Carolina, where they are produced more extensively than in any section of the United States, soy beans are harvested during the last of October and the month of November. Movement from farmers' hands begins December 1 and continues heavy throughout January, and sometimes later, depending upon whether the farmers consider the price offered a fair one. Some large farmers hold their supply until the spring demand and ship direct to the dealers.

Velvet Beans.—The harvesting of velvet beans is all done by hand labor, beginning the last of October and continuing until about January 1. The crop movement begins the first of November and continues heavy through December, January, and February. While a few farmers thresh or hull their velvet beans for market, most of the crop is marketed in the pod. The local shipper or dealer who is usually equipped with machinery for hulling takes the alternative of hulling and selling them for planting purposes or marketing them in the pod to mills for manufacturing purposes, depending upon the price offered by, and the demand from, each source.

IMPORTS OF FORAGE PLANT SEEDS PERMITTED ENTRY INTO THE UNITED STATES

Under the Seed Importation Act

Compiled by the Seed Laboratory of the Bureau of Plant Industry, United States Department of Agriculture

Kind of Seed.	June, 1918. Pounds.	June, 1917. Pounds.	Year ending June 30, 1918. Pounds.	Year ending June 30, 1917. Pounds.	Year ending June 30, 1916. Pounds.
Alfalfa	600	.....	44,700	3,169,600	3,251,796
Canada bluegrass	30,600	33,700	1,209,000	495,300	698,300
Alsike clover	87,400	4,700	3,518,200	4,329,000	1,113,464
Crimson clover	40,000	221,100	1,603,000	5,776,300	4,503,983
Red clover	155,700	41,300	4,067,000	5,343,600	32,508,537
White clover	.....	37,300	52,700	157,800	148,768
Broom-corn millet	833,700	114,200	1,583,700	786,400	1,101,556
Hungarian millet	.....	.....	9,000	295,500	117,759
Orchard grass	.....	.....	57,600	1,286,300	754,476
Rape	120,500	196,200	11,306,300	2,285,700	4,018,908
English rye grass	20,400	56,300	1,583,500	1,667,900	1,510,440
Italian rye grass	18,700	5,600	605,900	480,700	382,841
Common vetch	.....	.....	62,100	29,900	61,613
Hairy vetch	12,100	10,000	234,200	295,600	67,683

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Vegetable Seed Crop Conditions.

A majority of the growing vegetable seed crops are in good condition according to reports received from many large growers in the United States, although failures have been reported for some crops in certain sections. A deficiency of moisture all season and hot weather during June damaged many crops severely in California and the Pacific Northwest, while in the Middle West and East good stands are reported because of the unusually good growing weather that has prevailed. Crops growing in the river districts of California have suffered the least from drouth, and the prospects in this section are that fair to normal seed crops will be harvested, although reports dated June 28 estimate recent damage by the hot weather in this section from 15 per cent to "slight damage," according to local conditions.

Growers in the East and Middle West almost uniformly report good growing conditions, although stating that it is too early in the season to make an intelligent forecast. Stored root crops were damaged by frost last winter in many sections and some growers state that this will result in a decreased acreage.

Following are summaries of reports received from commercial vegetable seed growers for various crops.

Beans.—California growers say that lima beans are in fine condition, and prospects are good for a large crop. Growers having large acreages of beans in Colorado appear to be very optimistic about the crop in that State. The stands are good and plenty of moisture is available to carry the crop to maturity. Reports from Idaho indicate that there is a wide range in the development of the seed bean crops in that State because of variation in date of planting; the latest plantings having just been finished. The condition is normal.

Beet.—While some damage by drouth in certain sections has been reported, most California growers expect to harvest a normal crop of beet seed. Damage by frost earlier in the season cut down the acreage somewhat in certain localities. Reports from the eastern seed growing sections of the United States say that the beet crop is looking well and gives promise of a production above normal. "A considerable quantity of roots and bulbs were lost on account of the severe winter so that the acreage is somewhat restricted but the crop as it stands today promises rather better than normal," states a prominent New England seed grower. Reports from the West state that this crop is in good condition and, with the increased acreage planted in many sections, a good crop of seed is anticipated.

Cabbage.—In general the reports received on the cabbage seed crop are unfavorable. One eastern grower states that from present indications his deliveries will not be more than two to three per cent in spite of the fact that his acreage was very materially increased last year. "The Long Island cabbage seed crop this season will be very short owing to a very large per cent of the plants having been destroyed by the excessive cold of the past winter, and deliveries on contract orders in all probability will be smaller than for many years" is the report made by one grower. The condition of the cabbage seed crop in Washington is estimated to be 25 per cent of normal. Because of the continued hot, dry weather most of the top sprouts are drying up, when with ordinary moisture they would be setting seed pods. In Oregon the condition is 45 per cent of normal. This State is reported to be suffering from the worst drouth in years.

Carrot.—Considerable damage to the carrot seed crop, estimated at from 15 to 20 per cent, caused by hot weather has been reported from California. "Some carrot fields already have the appearance of being burned and some beet fields are showing a tendency to dry up; in fact, there are a number of fields of both carrot and beet in this section that will not be worth harvesting"; "We expect to harvest an average crop of carrot seed," were two of the reports received.

Celery.—California reports on celery seed vary considerably, some growers reporting that they will be able to make 100 per cent deliveries, while others state that their deliveries will not be more than 70 per cent. White Plume is reported to be a short crop. "Our crop of celery is fairly good and we think deliveries with most growers will run from 75 to 100 per cent" is the report of a central California grower.

Endive.—Some reports of total failure have been reported, and the condition of the remainder of the crop is considered doubtful, due to the continued hot weather. One grower, however, reports that he expects to be able to make 75 per cent of his deliveries.

Lettuce.—Damage to the lettuce crop by hot weather has been reported, and most growers in central California believe the crop will be very light. The crop in southern California, however, is reported to be in much better condition. Some few varieties are declared to be a total failure, and deliveries are variously estimated at from 50 to 75 per cent.

Onion.—Hot weather is said to threaten the onion seed crop in many sections of California and most growers say the weather of the next ten days will be a large factor in deciding crop prospects. Reports received from eastern growers of this crop are almost uniformly favorable, although some report a decreased acreage due to injury to the bulbs during the severe freezes of last winter. A considerably increased acreage of Bermuda onion seed both of the Crystal Wax and yellow varieties is reported in southern California. These varieties are said to be out of danger by one large grower, and he states that he expects to make deliveries about August 1.

Peas.—In California the pea seed crop has in many cases been reported a total failure, because of continued dry weather. In Wisconsin and Michigan, however, conditions are quite uniformly favorable, and a production considerably exceeding that of last year and fully equal to, if not better than, the average production the past five years is anticipated.

The condition of the pea seed crop in eastern Washington is estimated to be 50 per cent of normal. Both early and late plantings have been injured by the hot, dry weather, but with favorable growing conditions the latter probably will make a fair crop. In Montana the growing conditions in the larger areas are reported about normal, but in other scattered areas, because of dry weather, the yield is liable to be light. In the higher altitudes of Idaho, the crop is spotted because of hot winds and light frosts; in the lower altitudes the stand is also somewhat uneven. However, with favorable conditions throughout the rest of the season, it is believed that the production will equal that of 1917.

Radish.—Practically all reports agree that radish has been damaged badly in California by the hot weather in June, and growers expect only part of a normal crop. Some growers estimate that their deliveries will be from 35 to 45 per cent. The aphis injury to this crop in the Pacific Northwest will result in very light yields. What radish seed that is being grown in the Middle West and East is reported to be in good condition at the present time.

Spinach.—Deliveries on spinach seed will be from 50 to 75 per cent, according to several California growers. The crop in Washington is very poor, and stands are spotted because of lack of rain. Considerable acreage has been plowed up during the last 30 days and without timely rains the crop will not exceed 25 per cent of the anticipated production. Reports from the eastern seed-growing sections of the United States are more favorable, indicating a good condition on an increased acreage.

Sweet Corn.—Reports from Iowa, state that the sweet corn has germinated well and many good stands are reported, with weather conditions very favorable. A report on this crop from Nebraska is as follows: "Sweet corn is in good shape aside from a few fields of the later varieties that are behind the season as yet. The acreage is less than usual."

Tomato.—Reports from California state that tomatoes suffered considerable damage from the recent prolonged hot weather. Most of the first blossoms are said to have dropped off and the condition of the crop has been estimated by one grower to be 75 per cent of normal condition at this time. In the eastern States and Middle West growing conditions are not yet far enough advanced to make an intelligent forecast. Cold weather has retarded the setting out of the plants in some districts.

Turnip and Rutabaga.—The seed of these crops in Washington is reported drying up in the pods. In Oregon these crops are now being harvested and the yields are estimated to be about 60 per cent of normal. Reports from other sections of the United States indicate that the growing crops are in a favorable condition.

Vine Crops.—Practically all vine crops in Colorado, Nebraska, and the Pacific Northwest are reported to be in good condition and a normal yield from the acreage planted is expected. An anticipated shortage of labor is said to have decreased the vine-crop acreage in Colorado about one-third. Much of the acreage devoted formerly to cucumbers and muskmelons has been planted to pinto beans this year.